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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,653	10/17/2003	Sheng-Chun Wu	MR1035-1323	9814
4586	7590	02/23/2005	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			HAN, JASON	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/686,653	<b>Applicant(s)</b> WU ET AL.	
	<b>Examiner</b> Jason M Han	<b>Art Unit</b> 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:
  - a. Page 1, Line 19: Typographical error – “plat” should read as “plate”;
  - b. Page 2, Lines 1 and 2: Grammatical error – “need” should read as “needs”;
  - c. Page 2, Line 16, Typographical error – “plat” should read as “plate”;
  - d. Page 3, Line 2: Grammatical error – “match”;
  - e. Numerous grammatical errors are replete throughout the application. The examiner has forgone any correction due to the amount, and the specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.Appropriate correction is required.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the noncircular holes 224 and 322 as described in the specification [Figures 2-4 clearly depict holes of circular configuration]. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

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prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first and second noncircular holes [Claim 1] must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

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changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cover [Claim 10] must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

5. Claim 1 is objected to because of the following informalities:
- a. The recitation, "and one horizontal frame and the two vertical frames intervene each other with the noncircular holes and the pillars and are assembled to a □-shaped frame", is not a proper structural limitation nor the final product, but deals with a process of making;
  - b. The recitation, "and the optical plate is installed in the □-shaped frame, and another horizontal frame and the two vertical frames intervene each other to fix the optical plate", is not a proper structural limitation nor the final product, but deals with a process of making;
  - c. "□-shaped frame" is not a proper limitation, wherein applicant should not use a drawing or symbol;
- Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. Publication 2004/0156183) in view of Heyden (U.S. Patent 5737890).

3. With regards to Claim 1, Kim discloses a backlight device including a mold frame [Figure 1B: (260)], a plurality of lamps [Figure 1B: (210)], and optical plates [Figure 1A: (240, 250)].

Kim does not specifically teach the mold frame being modular, wherein two horizontal parallel frames and two vertical parallel frames are interconnected to one another.

Heyden teaches a modular frame assembly including:

- A plurality of horizontal frames [Figure 1: (16, 18, 20)] equipped in parallel, wherein each has on both ends a pillar [Figure 7: (22a)], and whereby a plurality of chutes [Figure 4: (22)] is respectively set on the opposite surfaces of the horizontal frames;
- Two vertical frames [Figure 1: (12, 14)] equipped in parallel, wherein each has holes [Figure 7: (40)] corresponding to the pillars so as to connect the horizontal and vertical frames; and
- An optical panel [Figure 3: (24)] with two sides that form a fixed support with a slant corresponding to a chute.

It would have been obvious to modify the backlight device of Kim to incorporate the modular frame assembly of Heyden to provide a more compact and robust unit, wherein the optical plate may be combined within the frame itself. Such a configuration is an obvious design choice, since it has been held that forming in one piece an article

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which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). In addition, it would have been advantageous to provide the modular assembly of Hayden within the backlight device of Kim to simplify manufacturing/repairs for the unit.

Kim in view of Hayden discloses the claimed invention as cited above, except for the horizontal and vertical frames each having a pillar and hole corresponding to another hole and pillar, respectively, on a different frame to make a connection. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate multiple pillars and holes corresponding to one another to unite the frame, since it has been held that mere duplication [*St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8] and rearrangement [*In re Japiske*, 86 USPQ 70] of the essential working parts of a device involves only routine skill in the art. In this case, multiple connections on each of the frames provide for a stronger hold, and subsequently, a more stable unit.

4. Claims 2-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. Publication 2004/0156183) in view of Hayden (U.S. Patent 5737890) as applied to Claim 1 above, and further in view of Miyamoto (U.S. Patent 6808302).

5. With regards to Claim 2, Kim in view of Hayden discloses the claimed invention as cited above, wherein the plurality of lamps [Kim: Figure 1B: (210)] are disposed in a backlight position behind the optical plates [Figure 1A: (240, 250)]. However, neither Kim nor Hayden specifically teaches a plurality of lamps having an electrode protection sleeve at both ends of each lamp.



Miyamoto teaches such lamp holders/electrode protection sleeves [Figure 6: (32)] over both ends of a plurality of lamps [Figure 6: (23)].

It would have been obvious to modify the backlight of Kim with the modular frame assembly of Hayden to further incorporate the lamp holders of Miyamoto to protect the lamps and ensure safe electrical connections within the unit.

6. With regards to Claim 3, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Miyamoto teaches the lamp holders being made of rubber [Figure 6; Column 3, Lines 63-65].

7. With regards to Claim 4, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Kim teaches a plurality of fillisters [Figure 1B: (222)] equipped on two frames [Figure 1B: (220)].

8. With regards to Claim 5, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Kim teaches a plurality of fillisters [Figure 1B: (222)] equipped on two frames [Figure 1B: (220)].

9. With regard to Claims 4-5, it also would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the fillisters either on the horizontal or vertical frames, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

10. With regard to Claims 6-7, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Kim teaches a plurality of fillisters [Figure 1B: (222)] that receive the ends of a lamp [Figure 1B: (211b)], while Miyamoto teaches the electrode protection sleeves [Figure 6: (32)] over

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both ends of a lamp. It should be noted that the fillisters and the electrode protection sleeves in combination ensure protection for each of the lamps, as well as a more stable unit.

11. With regard to Claims 8-9, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Miyamoto teaches the electrode protection sleeves/lamp holders being composed of a pedestal [Figure 6: (32)] and a prominence [Figure 6: (32a)].

12. With regards to Claim 10, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Kim teaches a cover [Figure 1A: (300, 500)] equipped on the backlight position of the optical plate.

13. With regards to Claim 11, Kim in view of Hayden, and further in view of Miyamoto discloses the claimed invention as cited above. In addition, Kim teaches the optical plates being a diffusion plate [Figure 1A: (240, 250); Page 2, Paragraph 32].

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art pertinent to the current application, but are not considered exhaustive:

US Patent 5584154 to Koepke et al;

US Patent 6199987 to Haba et al;

US Patent 6422720 to Fischer et al;

US Patent 6441874 to Saito et al;

US Patent 6527414 to Moon;

US Patent 6762807 to Lee et al;

US Patent 6776512 to Mori et al;

US Patent 6795135 to Moon;

US Patent 6796678 to Moon;


US Publication 2004/0246396 to Peng.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (2/11/2005)



**JOHN ANTHONY WARD**  
**PRIMARY EXAMINER**